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TAGS: [KSCA](#) [TSPL](#) [AMGT](#) [OTRA](#) [APER](#) [SENV](#) [PE](#)  
SUBJECT: Embassy Science Fellows Program (PERU)

REF: STATE 35305

¶1. Summary: Embassy Lima would like to host an Embassy Science Fellow, and proposes USGS scientist William Earl Brooks for a project lasting approximately six weeks in January and February 2007. Dr. Brooks would study the distribution and effects of mercury in connection with gold mining and other industries in Peru. Dr. Brooks is well known to the Embassy, has experience working in Peru and is an acknowledged expert in mercury and its relationship to gold mining. Mercury continues to be an environmental and health problem in the waters of Peru's southeast Amazonia, where riverine small-scale gold mining is extensive. Post agrees to provide housing and office support to Dr. Brooks. End summary.

¶2. Gold mining is an important source of revenue in Peru, especially with current high world prices. Mercury, while necessary for many industrial processes is a recognized global pollutant and health hazard. The extensive family-scale or artisanal mining in Peru uses mercury; the substance is also a byproduct of large-scale industrial gold mining. Dr. Brooks project would assist Post in its reporting on economic and environment issues. Mercury in mining is an issue that has environmental, health, trade and labor aspects, but Post has no experts to report on the specifics. Gold mining has been connected with environmental and social conflicts in Peru's recent history, with one dramatic mercury-related health disaster (Yanacocha) that continues to affect Peru's mining industry.

¶3. This project would be beneficial to USGS for its own publications and worldwide data collection. Peru is a leading importer, exporter and consumer of mercury.

¶4. A complete description of the proposed project begins at paragraph 12.

¶5. Post agrees to provide housing and an office with email/Internet access in the Economic Section of the Embassy. Post agrees to fund in-country travel as necessary, and anticipates several trips to areas of Peru outside of the capital where mercury is most prevalent and problematic.

¶6. Dr. Brooks has interacted with the Embassy over the past few years in the exchange of mining data. He is a recognized expert in the field and Post has read several of his publications. Brooks is in email contact with Post ESTHoff and has indicated that January and February are the best months in 2007 for his schedule. Post has emailed to OES a resume and some sample publications.

¶7. Embassy point of contact for this proposal is Howell

Howard, ESTH officer, Economic Section. His direct line is 511-618-2414 and his email address is howardhh@state.gov.

¶8. Dr. Brooks would serve as a "Scientific Consultant" to Post and will work closely with Post's ESTH Counselor and FCS officer and other appropriate Embassy staff. In addition to field research on mercury, he would:

- facilitate contacts and ties between Peru's mining, scientific, health and community sectors and U.S. counterparts;
- meet with Peruvian counterparts in relevant ministries, mining companies, NGO's, universities, and other research institutes;
- conduct research, surveys, interviews or assessments on related topics of importance to Post;
- furnish expert advice and consultation to GOP regulators of mercury;
- write reports of a technical or policy nature, which may be used in Embassy reporting or as background for Post policy planning;
- attempt to gather incidental data on child labor, trade, economic and water quality issues that would be of interest to the Embassy;
- gather incidental archeological data on pre-Colombian use of mercury for gold mining.

¶9. For this project Post seeks a Science Fellow with the following skills:

- fluent Spanish;
- experience in obtaining topic research data;
- familiarity and experience in the host country and its commodity infrastructure;
- experience with mercury reclamation and recycling established contacts;
- willingness to travel under adverse conditions present in some mining areas;
- experience in mining and geologic occurrence of mercury; and
- ability to interact with a wide range of actors.

While Post is not insistent on Dr. Brooks, he has demonstrated the qualifications needed for this proposed Embassy Fellow position.

¶10. A security clearance is desirable, at the secret level, but is not required.

¶11. Post will provide housing, office support, and in-country travel arrangement and other logistical support information as appropriate.

Project: USGS Mercury Commodity Studies in Peru  
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¶12. U.S. Embassy/Lima proposes to host Dr. William E. Brooks of the U.S. Geological Survey (USGS) as an Embassy Science Fellow during January-February 2007. Dr. Brooks works in the Metals Section of the U.S. Geological Survey's Minerals Information Team in Reston, VA. The Minerals Information Team is responsible for the collection and dissemination of information on the domestic and international supply and demand for minerals essential to the U.S. economy and national security. Their annual commodity reports provide data and information on consumption, human health issues, production, recycling, and shipments of mineral commodities. Dr. Brooks has done previous coal, gold, and other minerals-related research in Peru and other Latin American countries. The USGS and Dr. Brooks are aware of the Embassy Science Fellow program and Dr. Brooks is very interested in this opportunity.

¶13. Previous assignments for other USGS Embassy Fellows have included studies of arsenic in the water supply in Bangladesh; the environmental aspects of mercury used for artisanal gold mining in Surinam; and trace elements, such as arsenic and mercury, in coal and their effects on human health, and medical geology studies in South Africa.

#### Description of Problem

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¶14. Mercury is a recognized global pollutant that affects human health. Peru has a centuries-long history of mercury production and use. Mercury and cinnabar (the ore of mercury) were mined in Huancavelica (South of Lima) during pre-Inca times. At present, mercury is not mined as a primary commodity in Peru. Mercury is produced as a byproduct from several of Peru's gold and silver mines. Peru is a world leader in gold and silver production and the Pierina and Yanacocha (led by U.S. firm Newmont) mines lead the effort in byproduct mercury stewardship.

#### Yanacocha Spill

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¶15. In 2000, an environmental and human health incident took place when a truck carrying byproduct mercury from a gold mine spilled some of the mercury in a small town in northern Peru. Thinking that the mercury contained gold, the town's people collected the spilled mercury. Several suffered blindness and loss of motor skills. The resulting media attention has made mining in general, and gold mining in particular, a hot topic to this day.

¶16. In 2000, Yanacocha produced 48 metric tons (MT) of byproduct mercury, however, according to the USGS, only 11 MT were imported into the U.S. for recycling. Therefore, approximately 37 MT went elsewhere, much probably for small-scale gold mining. Yanacocha's average byproduct mercury production for 1994-2000 was 20 MT. According to the U.S. Geological Survey, in 2003 Peru exported 19 MT of byproduct mercury to the United States for recycling and imported 51 MT of mercury from the United States; this information changes radically from year to year. The imported mercury may be used mainly for artisanal gold mining, or chlor-alkali production (three plants in Peru use the mercury cell process), and possibly dental amalgam. Other uses include folk medicine. Also in 2003, Spain exported 53 MT of mercury to Peru, which also imports mercury from other countries that is found in automobile convenience switches, computer-electronics components, button-type batteries, fluorescent lamps, children's light-up toys, and perhaps, thermometers.

¶17. Mercury may be reclaimed and recycled from all of the above sources; however, there is no data on reclamation and recycling of this element in Peru. The Embassy Fellow would research and provide information on: 1) byproduct mercury production from Peru's gold mines; 2) the amount of mercury used or released into the Amazon from artisanal gold mining; 3) mercury purchases by the chlor-alkali industry; 4) disposition of mercury-containing industrial waste from the chlor-alkali industry; 5) imports of dental amalgam or losses after the dental procedure; 6) the number of mercury-containing fluorescent lamps that are imported, then discarded and broken in landfills, thereby releasing mercury; 7) the mercury content of coal used in metallurgical plants; 8) the number of mercury-containing button batteries that have been imported and discarded in landfills; 9) recycling of mercury-containing computer and electronics components; 10) collection of calomel, which contains mercury, from gold smelters; 11) mercury prices; and 12) host country research on mercury treatment and containment.

¶18. Post would like to use this project to help the GOP deal with environmental and developmental issues as part of Economic Growth and Development MPP objectives. As a model for the proposed study, Dr. Brooks recently published "Mercury Recycling in the United States in 2000" (USGS Survey Circular 1136-U) in which these issues are addressed.

In addition, he is responsible for commodity studies of mercury that are published annually in the USGS Minerals Yearbook and Mineral Commodity Summaries. Post proposes that Dr. Brooks apply his experience on this timely global concern to Peru, a leading mercury-producing and using nation.

¶19. Data collection would take place during a six-week period in January-February 2007. Upon arrival, Dr. Brooks would give a presentation describing his research in the U.S. and elsewhere. Prior to departure, he would outbrief the Embassy and produce a preliminary exit report. He would share with the Embassy, GOP and other interested parties his final research paper prepared after departure.

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